DOCUMENT RESUME

ED 268 907 HE 019 274

| | |
|---|---|
| AUTHOR | Froomkin, Joseph |
| TITLE | What Jobs Will Be Available for Persons with a Postsecondary Education in 1985? |
| INSTITUTION | Educational Policy Research Center for Higher Education and Society, Washington, D.C.; Froomkin (Joseph) Inc., Washington, D.C. |
| SPONS AGENCY | Department of Health, Education, and Welfare, Washington, D.C. |
| PUB DATE | Mar 79 |
| CONTRACT | 300-76-0026 |
| NOTE | 24p. |
| PUB TYPE | Viewpoints (120) |
| EDRS PRICE | MF01/PC01 Plus Postage. |
| DESCRIPTORS | Administrators; Clerical Workers; College Attendance; *College Graduates; *Education Work Relationship; *Employment Opportunities; Enrollment Projections; Equal Opportunities (Jobs); Family Income; Females; *Labor Market; Males; Nonprofessional Personnel; Postsecondary Education; Professional Personnel; Salaries; Sales Workers; Service Workers; Student Financial Aid; *Underemployment |

ABSTRACT

The labor market for persons who continue their education beyond high school is projected for 1985. After a brief discussion of the probable changes in the occupational distribution of new entrants by occupation, attention is directed to likely trends in wages of younger workers. Also considered are projections concerning underemployment of college graduates and competition between the sexes. The possible impact on college enrollments of the deteriorating job opportunities for postsecondary graduates is also addressed, and information on financial aid/subsidies for students by income level are included. It is concluded that career prospects will likely be more limited than in previous years for those who attend or complete college. It is suggested that persons who fail to complete college will gain little economic advantage from their brief postsecondary education. However, college graduates, and especially those who obtain a graduate degree in a professional field, will continue to gain a significant, but diminishing, economic advantage, as well as better access to good jobs. It is doubtful that the number of persons who enroll in higher education will decline as a result of these unattractive job prospects. However, students may tend to enroll part-time or attend low-cost schools. (SW)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

JOSEPH FROOMKIN INC.
1730 K STREET, N. W., WASHINGTON, D. C. 20006

ED268907

# WHAT JOBS WILL BE AVAILABLE FOR PERSONS WITH A POSTSECONDARY EDUCATION IN 1985?

By

Joseph Froomkin

EPRC for Higher Education and Society

Contract No. 300-76-0026

March 1979

HE 019 274

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joseph Froomkin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

## WHAT JOBS WILL BE AVAILABLE FOR PERSONS WITH A POSTSECONDARY EDUCATION IN 1985?

Between 1978 and 1985, an additional 4.3 million college graduates will enter the labor force, and some 4.6 million persons with one or more years of postsecondary education but less than a full college degree are likely to join them.[1] Many of these new entrants will fill the type of jobs formerly held by persons with less education.

The relative status of college-trained workers has been declining, compared to workers with less education, at least since the beginning of the 1970's. Only 76 per cent of employed college graduates held managerial and professional jobs in 1978, compared to 84 per cent 10 years earlier.[2] We believe that this deterioration in the quality of jobs will continue throughout the 1980's.

In this concluding report, we project the occupational distribution of persons who continued their education beyond high school. We discuss briefly the probable changes in the occupational distribution of new net entrants by occupation, and then speculate about the likely trend in the wages of younger workers who are likely to be affected most directly by the changing conditions in the labor market. We conclude this overview with a discussion of the possible impact of the deterioration of job opportunities for persons with a postsecondary education upon college enrollments.

Persons with four or more years of postsecondary education.

In its Occupation Outlook for College Graduates (1978/79 edition), the Bureau of Labor Statistics estimates that 6.5 million college graduates will be added to the experienced labor force between 1975 and 1985, bringing the number of employed college graduates to 20.5 million. Out of this total, some 2.5 million persons, according to the BLS, will be employed in jobs not usually filled by persons with college degrees.

Our projections, which assume that the labor force participation of women will continue to increase, place the increase at 7.4 million, bringing the number of employed college graduates to 21.4 million in 1985. Since we believe that the Bureau of Labor Statistics has overestimated the number of teachers and administrators in education likely to be employed in 1985, we calculate that the "surplus" of college graduates will range between 3.9 and 4.1 million.

We derived the projected occupational distribution of college graduates in 1985 in Table 1, using two different methods: (1) using 1970/75 net new entry rates by occupation (alternative I), and (2) assuming that college graduates will continue to displace persons with less education at the same rate they did in 1970/75 (alternative II). Both figures indicate that the share of professional and managerial jobs will decline to between 64 and 67 per cent of total employment in 1985, from 76 per cent in 1975. Our projections anticipate that the largest numbers of underemployed college graduates will fill

clerical jobs.

TABLE 1

ACTUAL (1975) AND PROJECTED (1985) DISTRIBUTION OF PERSONS WITH LABOR FORCE EXPERIENCE, 16 OR MORE YEARS OF EDUCATION, BY MAJOR OCCUPATION

| | (thousands) | | | (per cent) | | |
|---|---|---|---|---|---|---|
| | | 1985 | | | 1985 | |
| | 1975 | Alternative I | Alternative II | 1975 | Alternative I | Alternative II |
| Professional | 8,481 | 10,348 | 10,932 | 59.3 | 48.3 | 51.0 |
| Managers | 2,398 | 3,412 | 3,514 | 16.8 | 15.9 | 16.4 |
| Sales | 1,063 | 1,650 | 1,762 | 7.4 | 7.7 | 8.2 |
| Clerical | 1,130 | 3,685 | 3,494 | 7.9 | 17.2 | 16.4 |
| Other | - | 2,329 | 1,722 | 8.6 | 10.9 | 8.0 |
| | 14,282 | 21,424 | 21,424 | 100.0* | 100.0* | 100.0* |

*totals may not add up due to rounding.

The real extent of the underemployment of college graduates at any time is difficult to determine, since jobs with the same label may or may not utilize a person's college training. If one uses the Bureau of Labor Statistics' rather optimistic analysis of the proportion of jobs suitable for college graduates by broad occupational field, one arrives at the following prognosis of the distribution of the college-educated labor force: (1) The lion's share of the professional jobs "stolen" from persons with less than a full college education will not require a full college education; (2) a large number, over 2.5 million, of underemployed

college graduates will fill white-collar jobs; and (3) considerable numbers will find less interesting work either as salesmen, or in the service and blue-collar categories (Table 2).

These aggregate figures do not highlight what may very well be the most important new development in the 1980's: the ardent competition between the sexes for meaningful jobs. The dearth of teaching jobs[3] which reduced the proportion of employed women in elementary and secondary education from roughly one-half to one-third of the total employment for college-educated women between 1968 and 1978 will force women to compete more actively for other professional and managerial jobs. By 1985, the proportion of employed college-educated women holding teaching jobs is likely to decline further, to one-fifth of the total. The great imponderable is the intensity with which women will increasingly compete with men for professional and managerial jobs outside of the fields of education and health.

TABLE 2

ESTIMATED PROPORTION OF JOBS GENERALLY FILLED BY COLLEGE GRADUATES BY BLS, PROPORTIONS UNDERLYING THIS STUDY'S PROJECTIONS, AND EXCESS BY OCCUPATION

| | Per Cent Suitable Jobs | Alternative I | Alternative II | Excess (thousands) Alternative I | Excess (thousands) Alternative II |
|---|---|---|---|---|---|
| Professionals | 68.0 | 67.2 | 71.0 | - | 462 |
| Managers | 36.2 | 30.2 | 31.1 | - | - |
| Sales | 21.5 | 30.0 | 32.0 | 468 | 578 |
| Clerical | 6.5 | 23.6 | 22.3 | 2,678 | 2,464 |
| Others | 2.5 | 4.3 | 3.2 | 961 | 373 |
| | | | | 4,107 | 3,877 |

Source: Suitable Jobs: U.S. Department of Labor, Occupational Outlook for College Graduates, (1978/79 edition).

Table 3, below, shows two alternative projections of net entries into the labor force between 1975 and 1985, disaggregated by sex. The first alternative assumes that net mobility trends of the 1970-75 period will continue. The second simulates the effect of strong competition by women for professional and managerial jobs.

TABLE 3

NET MOBILITY BY SEX AND OCCUPATION 1975-1985
(thousands of persons)

| Alternative I | Professionals | Managers | Sales | Clerical | Other | Total |
|---|---|---|---|---|---|---|
| Male | 2,064 | 1,159 | 644 | 412 | 873 | 5,152 |
| Female | 938 | 255 | 753 | 962 | 1,276 | 4,184 |
| **Alternative II** | | | | | | |
| Male | 1,662 | 870 | 927 | 827 | 866 | 5,152 |
| Female | 1,338 | 544 | 166 | 962 | 1,174 | 4,184 |

Under the first alternative, the percentage of college-educated women holding jobs outside of the sub-collegiate education and health sectors will stay at a constant 21 per cent of total employment for professionals, in line with the 1968-1978 trend; under the second alternative, it will increase to 26 per cent. In the managerial and administrative area, the first alternative keeps the proportion of women constant, in line with 1960-1975 trends, and the second alternative increases this participation by some 50 per cent.

This second alternative illustrates the effect of some 700 thousand more women filling professional and managerial jobs.

If this happens, considerably fewer females will have to enter the sales field. By contrast, men, who will have been pushed out of professional and managerial positions, will be likely to find employment in either sales or clerical jobs.

Intuitively, we favor the second alternative. The proportion of women in professional and managerial jobs is projected to decline to 51 per cent of the total if past trends in net entry continue; on the other hand, if the trends anticipated by alternative II materialize, this proportion will decline less drastically, to 60 per cent of the total. The proportion of males in these two groups of occupations is projected at 72 per cent under alternative I, and 68 per cent under alternative II.

The lower share of women in desirable occupations started manifesting itself only recently. Until 1975, a higher proportion of college-educated women than college-educated men were either managers or professionals. Between 1975 and 1978, the dearth of new openings for teachers closed the door to professional occupations for many women. Despite the significant increase in the number of women employed as managers and administrators, there was a decline in the overall proportion of females in occupations traditionally filled by college graduates. In that year a slightly higher proportion of college-educated men held these types of jobs.[4]

The increased competitiveness of women for jobs may have a considerable impact on the wages paid to college graduates. Our simulations of the equations which were used to

derive the own-wage elasticity of college graduates[5] lead us to believe that if women do not compete more actively for professional and managerial jobs, the wage advantage of male college graduates aged 25-34, compared to the earnings of persons with a high school education, will remain close to present levels, some 23 per cent. If women do compete for these jobs more actively, however, the increased pool of competitors may reduce this advantage to 16 per cent. It will be remembered that the median wages of full-year, full-time male college graduates aged 25-34 were 36 per cent higher than those of high school graduates of the same age in 1971. This gap narrowed subsequently and by 1976, the latest period for which this data was available, it was 28 per cent.

These findings must be considered indicative and tentative rather than definitive and firm. Too many variables must be projected, each one subject to some degree of error, to allow one to be sanguine about the prediction. However, they are indicative of the effects of an increased supply of college graduates upon wages.

Persons with 13 to 15 years of education.

Much less attention has been paid to the occupational prospects of persons who ventured beyond high school but did not complete a full four-year course of postsecondary education. The reluctance of labor-force analysts to analyze and forecast this group's role in the labor market is understandable, since it consists of an unhomogeneous mixture of drop-outs or

stop-outs from conventional four- or two-year college programs, as well as persons who have attended, and graduated, from short-term training, vocational, or non-collegiate proprietary programs. Labor force statistics collected about this group do not distinguish between the different types of postsecondary experience. Given the latitude allowed to respondents because of the self-reporting of educational attainment, persons in this category are difficult to describe and characterize.

While we do not know too much about their backgrounds, we do know that an increasing number and proportion of persons with this level of education now fill blue-collar and service jobs. In 1975, roughly a third of the men were employed in blue-collar occupations, and another nine per cent held service jobs. Fewer than one in three were employed in professional or managerial jobs. Among women, roughly half held clerical jobs, and one in four was employed in a managerial or professional occupation. What kind of jobs will persons with some postsecondary education fill as their number in the experienced labor force increases from 13.6 to 20.6 million between 1975 and 1985?

We believe that the occupational profile of persons with less than a full college education will increasingly be skewed towards lower-paying jobs. Past trends point in this direction. Between 1960 and 1970, nearly three out of ten male and two out of ten female new entrants with some post-secondary education but less than a college degree filled

professional or managerial jobs. During the 1970-75 period, this proportion declined by a third for men and 12 per cent for women. In the course of the same five years, women with some college training were being squeezed out of clerical employment by female college graduates and ending up increasingly employed in blue-collar or service jobs.

We projected the probable distribution of persons with some postsecondary education using two different methodologies to allocate the new entries to various occupations. Under alternative I, it was assumed that net new entrants in the 1975 to 1985 period would be distributed between occupations just as they were in 1970-75. Under alternative II, the changing shares of new entries by occupation were projected to 1985, based on 1960-1975 trends. (See Table 4.)

TABLE 4

ACTUAL (1975) AND PROJECTED (1985) DISTRIBUTION OF PERSONS WITH LABOR FORCE EXPERIENCE AND 13-15 YEARS OF EDUCATION BY MAJOR OCCUPATIONAL GROUP

| | (thousands of persons) | | | (per cent) | | |
|---|---|---|---|---|---|---|
| | 1975 | Alternative I | Alternative II | 1975 | Alternative I | Alternative II |
| Professionals | 2,498 | 3,250 | 2,666 | 18.3 | 15.8 | 13.0 |
| Managers | 1,642 | 2,050 | 1,948 | 12.0 | 10.0 | 9.5 |
| Sales | 1,309 | 1,960 | 1,846 | 9.6 | 9.5 | 9.0 |
| Clerical | 3,470 | 5,285 | 5,021 | 25.4 | 25.7 | 24.4 |
| Service | 1,436 | 2,740 | 3,397 | 10.5 | 13.3 | 16.5 |
| Blue Collar | 3,048 | 4,895 | 4,992 | 22.4 | 23.3 | 24.3 |
| Farm | 230 | 395 | 704 | 1.7 | 1.9 | 3.4 |
| Total | 13,631 | 20,575 | 20,575 | 100.0* | 100.0* | 100.0* |

*totals may not add up due to rounding.

Both projections anticipate a decline in the proportion of persons with 13 to 15 years of education who have professional and managerial jobs. This proportion will decline from 30.3 per cent in 1975 to 26.8 per cent under alternative I and to 22.5 per cent under alternative II. The opportunity for new entrants, who are mostly younger workers, to snag openings in these high prestige occupations will decline quite substantially from the level of the 1960's. Under the first alternative, one out of five net new entrants will obtain such a job; under alternative II, only one out of eight will be able to fill a managerial or professional position.

We believe the second alternative is the more likely of the two, since competition for professional and managerial jobs is likely to accentuate on the part of college graduates.

Whichever alternative proves correct, we have little doubt that the majority of net new entrants will fill blue-collar, service and farm jobs. Some 60 to 70 per cent of net new male entrants will fill these types of jobs. Among women, the proportion is likely to be lower, probably between 25-30 per cent of net new entrants. Four out of ten female new entrants will get clerical jobs.

Our best judgement about the median wages of male full-year workers aged 25-34 with less than four years of college is that they will converge increasingly with those of high school graduates. The spread between wages of these two groups narrowed from 16 per cent in 1971 to 9 per cent in 1976. By

1985, the spread should not exceed 2 to 5 per cent.

Implications for postsecondary enrollments.

The changing market for college graduates and for persons with some higher education could have a very important impact on the postsecondary sector.

If students enrolled in college or took other types of postsecondary training mostly for economic gain, the smaller difference between the wages earned by high school graduates and by persons with some postsecondary education could lead either to decisions not to enroll or to efforts to scale down investments in education.

Both trends are likely to manifest themselves in the near future. The proportion of male high school graduates who decided to enroll in higher education has already fallen from the Vietnam war peak of 70 per cent to about 55 per cent. The enrollment of females, both black and white, continues to hold steady or increase, but economists ascribe it to the fact that females anticipate benefiting more from higher education in economic terms than women from previous generations, and if these hopes are not realized, their enrollment rates may decline as well.

The decline in the real and relative earnings of young graduates and the deterioration of their occupational attainment are among the principal reasons for the recent decline in propensity to enroll in postsecondary education, according to Richard Freeman. He states:[6]

> In response to the depressed market, the proportion of young men enrolling in college dropped substantially, reversing the long-term upward trend in educational attainment.

Stephen Dresch also used relative wages as an important component in projecting future enrollments. The numbers in the college graduating "cohorts (i.e., 25-year-olds) are determined by educational wage differentials which they observed in prior periods, specifically between the age of 17 and 24. An increase in the educated age differential at one point in time will increase the educated proportions of immediately following cohorts."[7]

There are good reasons to question these prognoses, since they are based on assumptions of median rates of return on investment in education to average students with average expenses. As long as there are wide variations in costs and subsidies to students, such calculations are not very meaningful. They were derived to gauge the profitability of investment in higher education to either individuals or society, and were mistakenly adapted as a tool for forecasting enrollments.

The rates of return to individual students are likely to vary depending upon the subsidies they receive and the costs which they incur to attend school. Both subsidies and costs can vary a great deal, for individuals within an income group, and income group by income group. For instance, we estimated that in 1976/77, subsidies to students from families with incomes below $10,000 ranged from $2,333 for students in the 25th

percentile of the distribution of college costs to $3,256 for those in the 85th percentile. Subsidies increased as the costs of college increased for students from modest economic backgrounds, and decreased for the more affluent (Table 5).

TABLE 5

SUBSIDIES BY DIFFERENT LEVELS OF COLLEGE COSTS BY INCOME GROUPS, 1976/77
(per capita)

| 25th Percentile | Less Than $10,000 | $10,000-$15,000 | $15,000-$25,000 | $25,000+ |
|---|---|---|---|---|
| Total | 2,333 | 2,050 | 2,075 | 2,190 |
| Income Tax | 88 | 179 | 213 | 328 |
| Loans | 20 | 1 | 2 | 2 |
| Institutional | 1,850 | 1,850 | 1,850 | 1,850 |
| Direct Aid | 385 | 20 | 10 | 10 |
| **50th Percentile** | | | | |
| Total | 3,084 | 1,594 | 1,694 | 1,355 |
| Income Tax | 145 | 191 | 235 | 328 |
| Loans | 29 | 10 | 16 | 2 |
| Institutional | 1,850 | 1,293 | 1,293 | 1,015 |
| Direct Aid | 1,060 | 100 | 150 | 10 |
| **75th Percentile** | | | | |
| Total | 3,237 | 1,882 | 1,834 | 1,024 |
| Income Tax | 221 | 293 | 317 | 472 |
| Loans | 41 | 72 | 80 | 2 |
| Institutional | 1,015 | 737 | 737 | 180 |
| Direct Aid | 1,960 | 780 | 700 | 370 |
| **85th Percentile** | | | | |
| Total | 3,256 | 2,317 | 1,531 | 1,329 |
| Income Tax | 245 | 413 | 332 | 484 |
| Loans | 44 | 144 | 88 | 5 |
| Institutional | 737 | 180 | 310 | 440 |
| Direct Aid | 2,230 | 1,580 | 800 | 400 |

Source: Joseph Froomkin, Middle Income Students and the Cost of Postsecondary Education, Washington, D.C., 1978.

Very large variations in contributions to the cost of college are observed by income group. For instance, dependent students from families earning less than $7,500 a year contributed $1,162 towards their costs, slightly over 40 per cent of the total. By contrast, students from families with incomes over $20,000, on the average, paid over 90 per cent of the costs out of student earnings and parental contributions.[8]

Economists prefer to look at college costs from another angle. They calculate the cost of college as the sum of tuition and the foregone earnings of students. There are two ways of calculating foregone earnings. The first and most straightforward is to subtract student earnings from the average median earnings of persons in the same age group. The more sophisticated method consists of reducing the average or median earnings of persons by the probability of unemployment. As the median wage in 1976 of a young, full-time, full-year, male worker 18 to 24 was $8,780, the foregone earnings adjusted for 16.2 per cent unemployment was $7,340.[9]

A typical dependent student from a low-income family with parental earnings of less than $7,500 spent an estimated $1,000 on tuition, books and transportation. This amount was reimbursed to him by grants. Thus, his only costs were foregone earnings, i.e., $7,340, less the estimated amount earned during the year, $845. This student's investment in education was $6,495.

Part-time students' earnings and labor participation

rates did not differ substantially from those of persons who did not attend postsecondary education. Their only costs were tuition, books and transportation. Most of these students attend public institutions. Their tuition, books and transportation should not amount to over $400, on the average. The 13 per cent who attend private institutions probably incur costs which are three or four times as high.

With so wide a range of costs incurred to attain a given level of education, it is unlikely that rates of return that are calculated on the basis of median salaries and median costs of education can serve as a useful forecasting tool to predict enrollments. It would be much more reasonable to view the "market" for postsecondary education as a series of segments, with the demand shifting for each segment in response to different rates of return.

For their freshman and sophomore years of postsecondary education, for instance, we would expect an increasing proportion of students to choose such low-cost alternatives as enrolling part-time, since the risk of not completing a degree is high at the outset of a college career. During the junior and senior years, when there is less risk of non-completion, higher-cost alternatives may be chosen. These hypotheses are substantiated by current patterns of enrollment: 69 per cent of freshmen are enrolled full-time, but by the senior year the proportion of full-time students rises to 87 per cent. Similarly, the proportion of full-time students enrolled in higher-cost

(private) schools also increases from 22 to 30 per cent between the freshman and senior years. Among part-time students, it goes up from 10 to 30 per cent.

TABLE 6

DISTRIBUTION OF UNDERGRADUATE STUDENTS BY COLLEGE YEAR ENROLLED BY STATUS AND TYPE OF INSTITUTION

| Year | Full-Time | Part-Time | Total | Full-Time as % of Total | Private as % of Total Full-Time | Private as % of Total Part-Time |
|---|---|---|---|---|---|---|
| 1 | 1,816 | 813 | 2,629 | .69 | .22 | .10 |
| 2 | 1,694 | 612 | 2,306 | .73 | .22 | .10 |
| 3 | 1,241 | 262 | 1,503 | .83 | .27 | .19 |
| 4 | 1,185 | 184 | 1,369 | .87 | .30 | .30 |
| | 5,396 | 1,871 | 7,807 | .23 | | |

Source: Derived from SIE tapes, adjusted to conform with NCES fall enrollment of part-time students.

If one visualizes the demand for postsecondary education both as a social demand to satisfy requirements for status, knowledge or other non-economic goals and as an investment activity, one comes to the following conclusions:

(1) The total number of persons enrolling in higher education may be affected only slightly by changes in the occupational status of persons with some college education or with college degrees,

(2) A higher proportion of students will opt for less expensive choices, such as public instead of private education. In cases where tuition and living costs must be borne by the family or the

student, i.e., in upper-middle- and upper-level-income families, reasons will be found to choose lower-cost alternatives for those students who have good prospects of completing four years of education.

(3) Students with more limited educational horizons, or those who consider themselves high academic risks, may increasingly choose to attend part-time, thus decreasing the costs they incur.

Finally, an observation may be in order about the increased competition for suitable jobs among college graduates. Between 1967/68 and 1975/76, the relative advantage in wages of persons who completed one or more years of graduate education widened from 12 to 27 per cent. There is increasing evidence that graduate study is replacing the baccalaureate as the key to occupational success. This development will act as a further incentive to keep enrollments high.[10]

Implications for institutional policies.

The changes to be expected in higher education during the next ten years should cause a re-examination of admissions policies and curricular emphases. We have argued that high-cost schools will increasingly attract students from both extremes of the economic scale: those who qualify for massive aid, and the very rich. The resentment of middle-class parents of students will increase.

The curriculum planners need to do more soul-searching about their future goals. If a high proportion of students is destined to fill lower-status jobs, should the curricula emphasize vocationally-oriented courses during, say, the first two years of postsecondary education? Arguments can be marshalled both for and against such a move. Our studies of the early careers of persons of the high school class of 1972 have indicated that vocational training paid off more frequently than academic training.[11] This would argue for an injection of vocational subjects into the curriculum in the first two years of college, especially for high-risk and other students with limited educational ambitions. Yet it can be argued just as plausibly that these very students could profit more than others from a broadening of their cultural horizons. If they are to spend their lives in jobs where they can exercise only limited initiative, an introduction to general or liberal education may at least enable them to participate more actively in cultural and political activities. Is this not the purpose of postseconary education?

A case for general or liberal education can be made more cogently for the junior and senior years of college, as long as employers encourage a fifth year of education as a prerequisite for desirable port-of-entry jobs. If this fifth year is considered pre-professional training, a place ought to be found in the curriculum for broader learning. By the same token, the content of master's degree programs should be geared more

closely to work opportunities.

Conclusions.

College graduates and persons with some college education will face bleak career prospects in the next decade, compared to their peers who entered the labor force in previous years. However, if our reading of the labor market is correct, those with more education will still go to the head of the line and obtain more desirable jobs.

We do not foresee that the surplus of educated workers will leave them jobless. When conditions change drastically, they will still find work, but they will command much smaller premiums over persons with a high school diploma.

It is doubtful that the number of persons who enroll in higher education will decline as a result of these unattractive job prospects. However, we believe that a majority of students will act in the way postulated by economists and enroll part-time or attend low-cost schools. Part-time attendance, which is closely related to short-term participation, will depress the workloads of colleges and universities even more than demographic factors have led us to expect.

We would like to urge academic policy-makers to review the organization of their curricula in the light of these developments. Suitable programs must be devised for persons who are not likely to complete five years of postsecondary education. The "good" jobs will increasingly go to persons with some graduate training. In the increasingly competitive

environment of the 1980's, terminal graduate degrees tailored to job openings will gain increasing popularity.

The next few years will certainly be a period of rapid change for students, graduates and curricula. The declining quality of jobs filled by college graduates, the narrowing premium paid for their services and, consequently, the increasing doubts about the uses and the value of postsecondary education will spark a lively debate about the functions of higher education institutions.

We have attempted to contribute to this debate by providing facts and figures about the shape of the future. We foresee that (1) persons who fail to complete college will gain very little economic advantage from their brief postsecondary education, and (2) college graduates, especially those who continue to a graduate degree in a professional field, will continue to reap a significant, but diminishing, economic advantage, and will still go to the head of the line for good jobs. There is considerable uncertainty about the way "good" jobs will be allocated among the sexes. If women reorient their career preparation drastically, de-emphasizing education, and set their sights on business and professional jobs traditionally held by men, an increasing proportion of male college graduates will be employed in clerical and sales capacities.

In the past, postsecondary institutions adjusted themselves quickly to the new needs of American society. They will have to change their course, once again, in the next few

years. Some will increasingly emphasize vocational preparation, and others will prepare their students to lead richer lives, irrespective of the job they hold. It will be interesting to observe to what extent public policy adjusts to these new roles. We are living in interesting times.

Footnotes

[1]Cf. Scott Campbell Brown, "Educational Attainment of Workers--Some Trends from 1975 to 1985," Monthly Labor Review, February 1979, p. 55 with projections in Tables 1 and 2 in Supply and Demand for Persons with Postsecondary Education (October 1976).

[2]Brown, op. cit., p. 58.

[3]See Brown, idem, and especially A. J. Jaffe and Joseph Froomkin "Occupational Opportunities for College-Educated Workers," Monthly Labor Review, June 1978, p. 20.

[4]Brown, ibid.

[5]In this connection, we assumed a 2.5 per cent growth in productivity, wages for high school graduates and older part-college persons. The equations in S. Nollen, Demand for College-Educated Labor were solved.

[6]Richard B. Freeman, The Over-Educated American, Academic Press, New York: 1976, p. 184.

[7]Stephen P. Dresch, "Demography, Technology, and Higher Education: Toward a Formal Model of Educational Adaptation," Journal of Political Economy, June 1975, p. 547.

[8]See Joseph Froomkin, "Middle Income Students and the Cost of Education," Educational Record, Vol. 59, No. 3.

[9]U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 114, "Money Income in 1976 of Families and Persons in the United States," U.S. Government Printing Office, Washington D.C. 1978, p. 192. For unemployment, see Monthly Labor Review, 1977.

[10]A. J. Jaffe and Joseph Froomkin, "Changes in the Employment Patterns of College-Educated Workers 1950 into the 1970s," 1978 Proceedings of Social Statistics Section, American Statistical Association, Washington, D.C. 1979, p. 606.

[11]David Selby, Impact of Short-Term Postsecondary Education on Early Work Experience, Washington, D.C.: Joseph Froomkin Inc., 1979.